

REMARKS**The Rejections under 35 U.S.C. § 103(a)**

Claims 1-8 and 10-17 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over various combinations of U.S. Patent Application Publication No. 2002/0057247 to *Lee et al.* ("*Lee*"), U.S. Patent No. 6,753,855 to *Yu* ("*Yu*"), U.S. Patent No. 6,091,164 to *Buell* ("*Buell*"), and U.S. Patent Application Publication No. 2002/0130830 to *Park* ("*Park*"). Applicant respectfully traverses, noting that none of these references, singly or in combination, discloses every element of any of these claims as amended. More specifically, none discloses operation in synchronous or asynchronous mode according to a timing signal. Additionally, none discloses a synchronous mode that involves synchronizing with a timing signal.

As noted by Examiner, neither *Lee* nor *Yu* discloses operation in both synchronous and asynchronous modes (e.g., Office Action, pp. 3-4). Neither *Lee* nor *Yu* thus discloses operation in synchronous or asynchronous mode according to a timing signal.

Neither of the remaining references cures this deficiency of *Lee* and *Yu*. *Park* does not appear to disclose any synchronous or asynchronous mode. *Buell* discloses a boost circuit 12 with transistors 21, 52 that direct power to a lamp 27 synchronously or asynchronously depending on whether conductor 55 is present or not (Col. 3:46-48; FIG. 1). That is, transistors 21, 52 operate synchronously or asynchronously with each other according to whether a conductor 55 is connected to their gate terminals or not (*Id.*).

At least two points are noted with regard to this disclosure of *Buell*. First, *Buell* discloses a circuit 12 that operates in either synchronous or asynchronous "mode" depending on the presence of a wire, i.e. conductor 55. *Buell* does not disclose that this wire is connected/disconnected according to any signal, and certainly does not disclose that it is connected/disconnected according to a timing signal. Claim 1 as amended is thus patentable over each of the above references for at least the reason that it recites "an inverter which is operated in a synchronous mode upon receiving the timing signal from the inverter control unit, and in an asynchronous mode when the timing signal is not received." Similarly, claim 4 as amended is patentable over each of the above references for at least the reason that it recites "an inverter which is operated in a synchronous mode upon receiving the timing signal from the inverter control unit, and in an asynchronous mode when the timing signal is not received." Likewise, claim 8 as amended is patentable over each of the above references for at least the reason it recites a "synchronous mode in which the timing signal is output from the

inverter control unit" as well as an "asynchronous mode in which the timing signal is not output from the inverter control unit."

Second, as *Buell* does not disclose operation in synchronous/asynchronous mode according to a timing signal, *Buell* cannot disclose that this synchronous mode also synchronizes with the timing signal. Claim 1 as amended is thus patentable over each of the above references for at least the additional reason that it recites "wherein the inverter is operated at a frequency that is synchronized with a frequency of the timing signal during the synchronous mode." Similarly, claims 4 and 8 as amended are patentable over each of the above references for at least the additional reason they recite that "a frequency of the voltage applied to the lamp is synchronized with a frequency of the timing signal during the synchronous mode."

The remaining pending claims each depend from one of claims 1, 4, or 8, and are thus each also patentable for at least these same reasons.